

CLAIMS

What is claimed is:

1. A miter saw having a scale magnifier for measuring the bevel tilt of a tiltable mounted power tool, comprising:
  - a stationary portion having a front and a back;
  - a tiltable portion upon which is mounted a power tool, the tiltable portion being mounted on or proximate to the stationary portion; and
  - a measurement section for providing a measurement corresponding to a tilt of the tiltable portion with respect to an axis in which the measurement of the tilt is scalable with respect to an amount of the tilt.
2. The miter saw having a scale magnifier of Claim 1, the measurement section including a rotary mechanism.
3. The miter saw having a scale magnifier of Claim 2, the rotary mechanism including a gear.
4. The miter saw having a scale magnifier of Claim 2, the rotary mechanism including a pulley.
5. The miter saw having a scale magnifier of Claim 1, the measurement section including a first gear determined by a tilt of the power tool and a second gear driven by the first gear on a long shaft that extends from the back of the stationary portion to the front of the stationary portion.
6. The miter saw having a scale magnifier of Claim 5, the measurement section further including a third gear at the end of the long shaft proximate the front of the stationary portion and a fourth gear on a bevel scale axis shaft driven by the third gear.

7. The miter saw having a scale magnifier of Claim 6, the fourth gear fixedly attached to an indicator.
8. The miter saw having a scale magnifier of Claim 7, the indicator including a cylinder having markings and rotating in unison with the fourth gear.
9. The miter saw having a scale magnifier of Claim 8, further comprising a handle having an arm proximate the fourth gear.
10. The miter saw having a scale magnifier of Claim 9, the arm of the handle acting to prevent motion of the fourth gear and lock the tilt of the tiltable portion.
11. The miter saw having a scale magnifier of Claim 6, further comprising a handle having an arm proximate the third gear.
12. The miter saw having a scale magnifier of Claim 11, the arm of the handle acting to prevent motion of the third gear and lock the tilt of the tiltable portion.

13. A miter saw having a scale magnifier in which a saw blade is mounted on a rotary support and is tiltable with respect to a miter base, comprising:

means for translating rotary motion of the rotary support from a far end of the miter base to a near side of the miter base with respect to an operator of the miter saw; and

means for scaling the rotary motion of the rotary support into a measurement readable by the operator.

14. The miter saw having a scale magnifier of Claim 13, further comprising means for locking a bevel of the rotary support, wherein the bevel is locked by biasing a long rod forward and clamping a bevel housing against the miter base.

15. The miter saw having a scale magnifier of Claim 13, the means for scaling being disposed at the far end of the miter base with respect to the operator.

16. The miter saw having a scale magnifier of Claim 13, the means for scaling being disposed at the near side of the miter base with respect to the operator.

17. The miter saw having a scale magnifier of Claim 13, the means for scaling being disposed both at the near side and far end of the miter base with respect to the operator.

18. The miter saw having a scale magnifier of Claim 13, a ratio of scaling by the means for scaling the rotary motion of the rotary support into the measurement readable by the operator not being in a 1:1 ratio.

19. The miter saw having a scale magnifier of Claim 13, further comprising means for displaying the measurement at the near side of the miter base with respect to the operator.

20. The miter saw having a scale magnifier of Claim 19, the means for displaying being mechanical.

21. A miter saw, comprising:
  - a rotary support for a rotary saw blade;
  - a miter base having a front and a back upon which the rotary support is rotatably mounted, the miter base including a gear and shaft mechanism for translating the tilt motion of the rotary support at the back of the miter base to the scale magnifier at the front of the miter base.
22. The miter saw of Claim 21, the scale magnifier having an angular movement with respect to an angular movement of the bevel housing in a 1:1 ratio.
23. The miter saw of Claim 21, the scale magnifier having an angular movement with respect to an angular movement of the bevel housing less than a 1:1 ratio.
24. The miter saw of Claim 21, the scale magnifier having an angular movement with respect to an angular movement of the bevel housing greater than a 1:1 ratio.
25. The miter saw of Claim 21, the miter base further having a handle operatively coupled to and proximate the scale magnifier such that the handle operatively locks the tilt of the bevel housing and unlocks it to permit rotation of the bevel housing.

26. A front bevel indicator for a miter saw having a moveable saw and a miter base, comprising:
  - a moveable element coupled to a first shaft, the moveable element being disposed at a front of the miter base, the moveable element having indicia for measuring a bevel of a moveable saw blade.
27. The front bevel indicator of Claim 26, further comprising a locking mechanism at the front of the miter base for locking the bevel of the rear bevel housing.
28. The front bevel indicator of Claim 26, the moveable element being a rotary cylinder.
29. The front bevel indicator of Claim 26, the moveable element being a bar that experiences linear translation.
30. The front bevel indicator of Claim 26, wherein a translation assembly translates a bevel from a rear bevel housing supporting the moveable saw into a rotational movement of the first shaft at the front of the miter base, the bevel of the moveable saw capable of being locked into place.
31. The front bevel indicator of Claim 26, the indicia including numerals.
32. The front bevel indicator of Claim 28, further including a pointer.
33. The front bevel indicator of Claim 32, the pointer being stationary and supported by the miter base.
34. The front bevel indicator of Claim 32, the pointer being on the rotary cylinder.

35. A front bevel lock for a miter saw having a miter, comprising:
  - a grippable portion; and
  - a retaining portion that moves in conjunction with the grippable portion, the retaining portion locking a bevel of the saw blade in which the saw blade is beveled at an opposing end of the miter base from the front bevel lock.
36. The front bevel lock of Claim 35, the retaining portion including a cammed surface.
37. The front bevel lock of Claim 35, the retaining portion including a shoulder.
38. The front bevel lock of Claim 35, the retaining portion passing through a housing at the front of the miter base.
39. The front bevel lock of Claim 35, the grippable portion and the retaining portion forming an almost entirely enclosed loop.
40. The front bevel lock of Claim 39, the almost entirely enclosed loop being substantially rectangular in shape.
41. The front bevel lock of Claim 35, the grippable portion being a screwable handle and the retaining portion including a threaded bolt that releasably contacts a shaft for translating the bevel of the saw blade to a front bevel indicator.

42. A miter saw having a moveable saw and a miter base, comprising:
  - a miter base having a front portion and a rear portion, the front portion generally opposing the rear portion;
  - a saw capable of attaining a plurality of bevels with respect to the miter base; and
  - a bevel indicator disposed on the front portion of the miter base, the bevel indicator indicating the bevel of the saw.
43. The miter saw as described in claim 42, wherein the saw is attached to the miter base at the rear portion.
44. The miter saw as described in claim 42, the bevel indicator including a rotary mechanism.
45. The miter saw as described in claim 44, the rotary mechanism including a gear.
46. The miter saw as described in claim 44, the rotary mechanism including a pulley.
47. The miter saw of Claim 42, the bevel indicator having an angular movement with respect to an angular movement of the bevel of the saw in a 1:1 ratio.
48. The miter saw of Claim 42, the bevel indicator having an angular movement with respect to an angular movement of the bevel of the saw less than a 1:1 ratio.
49. The miter saw of Claim 42, the bevel indicator having an angular movement with respect to an angular movement of the bevel of the saw greater than a 1:1 ratio.

50. A miter saw having a moveable saw and a miter base, comprising:
  - a miter base having a front portion and a rear portion, the front portion generally opposing the rear portion;
  - a saw capable of attaining a plurality of bevels with respect to the miter base; and
  - a retaining portion disposed on the front portion of the miter base, the retaining portion suitable for locking a bevel of the saw with respect to the base.
51. The miter saw of Claim 50, the retaining portion including a handle to lock one of the plurality of bevels.
52. The miter saw of Claim 50, the retaining portion including a handle that moves a threaded bolt so as to lock one of the plurality of bevels.
53. The miter saw of Claim 50, the retaining portion including a cammed surface actuated by a handle for locking the bevel of the saw.
54. The miter saw of Claim 50, the retaining portion including a shoulder actuated by a handle for locking the bevel of the saw.